

Application No: 10/528,540

Amendment dated June 26, 2006

Reply to Office Action Dated March 7, 2006

Attorney Docket No: 3926.143

IN THE CLAIMS:

The following listing of claims replaces any earlier listing:

- 1-13. (canceled)
14. (currently amended) A plasma wire burner for plasma spray, comprising: having
at least two burner tubes (3) for supplying electrodes, ~~the electrodes in the form of~~
wires (5) from a supply tube (1), the electrodes being passed through the burner tube (3)
~~in the direction of the surface of an object to be coated via~~
a feed device (7) for passing an electrode through a burner tube (3) in a direction
toward a surface of an object to be coated, the feed device which has numerous a
plurality of guiding and/or sliding elements (8) which are mounted such that they can
rotate for deforming the wire in an elastic or plastic range,
wherein the feed device (7), ~~which has guiding and/or sliding elements (8), and~~
~~via which the wire (5) is deformed in the elastic or plastic range,~~ is integrated in the
burner tube (3) or is held in it, and wherein the guiding and/or sliding elements (8) are in
the form of rollers or ball bearing mounted rollers,
wherein the burner tube (3) or ~~[[a]]~~ the supply tube (1) is formed from three
segments which can be joined together,
wherein the burner tube (3) or the supply tube (1) has an approximately circular
cross section when viewed from the front, and
wherein the central segment of the burner tube (3) or of the supply tube (1) is
approximately wedge-shaped when viewed from the front.
15. (currently amended) The plasma wire burner as claimed in claim 14, wherein two feed
~~apparatuses~~ devices (7) are provided and one feed ~~apparatus~~ device (7) is in each case
arranged in ~~the area of in each case one intersection point of the burner and of or the~~
supply tube (1), with a cathode wire being guided via the first feed ~~apparatus~~ device, and
an anode wire being guided via the other feed ~~apparatus~~ device.

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16. (currently amended) The plasma wire burner as claimed in claim 14, wherein the feed device is a deflection device (7) ~~has numerous~~ having a plurality of deflection rollers (8) which are arranged one behind the other at a distance from one another and interact with at least one deflection roller (9) whose diameter is the same or larger, which, together with the ~~numerous~~ plurality of deflection rollers for holding the wire (5), form a guide path.
17. (currently amended) The plasma wire burner as claimed in claim 16, wherein the larger deflection roller (9) is arranged with its external circumference at a distance (4) from the ~~numerous plurality of~~ opposite deflection rollers (8) ~~which are arranged one behind the other, with the distance (4) between the larger deflection roller (9) and the numerous plurality of deflection rollers (8) which are arranged one behind the other and interact with it~~ being approximately of the same size as or larger than the diameter of the wire (5).
18. (currently amended) The plasma wire burner as claimed in claim ~~[[14]]~~ 16, wherein each deflection roller (8) is arranged at the same distance (4) from the external circumference of the opposite larger deflection roller (9).
19. (currently amended) The plasma wire burner as claimed in claim ~~[[14]]~~ 16, wherein the wire is guided via ~~[[a]]~~ the deflection device (7) ~~which has numerous guiding and/or sliding elements (8) which are mounted such that they can rotate, by means of which deflection device (7) the wire (5) is deformed in the elastic or plastic range, with the deflection device (7) having numerous,~~ the plurality of deflection rollers (8) ~~which are arranged one behind the other and are~~ mounted in ball bearings, and ~~having the~~ at least one deflection roller (9) which has a larger diameter, is likewise mounted in a ball bearing and is arranged with its external circumference at a distance (4) from the ~~numerous plurality of~~ deflection rollers (8) ~~which are arranged one behind the other, with the distance (4) being approximately the same as or larger than the diameter of the wire (5).~~

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20. (currently amended) The plasma wire burner as claimed in claim ~~[[14]]~~ 16, wherein the deflection rollers (8, 9) have a guide groove (14) which is arranged concentrically with respect to the axis (10, 11) of the deflection rollers, for guiding the wire (~~[[4]]~~ 5).
21. (currently amended) The plasma wire burner as claimed in claim 14, wherein ~~the~~ shafts (10, 11) of the deflection rollers (8, 9) are held in two segments or plates (12, 13) which are arranged at a distance from one another and between which the deflection rollers are arranged such that they can rotate.
22. (currently amended) The plasma wire burner as claimed in claim ~~[[14]]~~ 16, wherein a sliding contact (15) is provided in front of and/or behind the deflection rollers (8, 9) and is pressed against the surface of the wire (~~[[4]]~~ 5) by means of a spring (16).
23. (currently amended) The plasma wire burner as claimed in claim ~~[[14]]~~ 16, wherein the plurality of numerous deflection rollers (8) which are arranged one behind the other are provided in a first row and in a second row at a distance (4) from ~~[[it]]~~ the first row, in order to guide the wire (~~[[4]]~~ 5).